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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,361	11/03/2005	Michel Vaultier	0508-1131	4777

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YOUNG & THOMPSON  
745 SOUTH 23RD STREET  
2ND FLOOR  
ARLINGTON, VA 22202

EXAMINER

PASTERCZYK, JAMES W

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/529,361	<b>Applicant(s)</b> VAULTIER ET AL.	
	<b>Examiner</b> J. Pasterczyk	<b>Art Unit</b> 1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 33-64 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 33-64 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/28/05 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/28/05</u> . | 6) <input type="checkbox"/> Other: _____  |

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1. The abstract of the disclosure filed 3/28/05 is objected to because it uses non-conventional terms such as “functional” when the correct term is --functionalized--. In addition the abstract refers to the “use” of reagents, and gives no specific examples that may help a future searcher in trying to understand the actual nature of the invention. Correction is required. See MPEP § 608.01(b).

2. The drawings are objected to because all except figure 12 have machine marks and/or multiple black dots covering the page. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The instance specification, including the claims, is indefinite, confusing, and written in improper English such that it is not clear what is being claimed. Applicant is required to

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submit an amendment which clarifies the specification so that the examiner may make a proper comparison of the invention with the prior art.

A substitute specification including the claims is required pursuant to 37 CFR 1.125(a) because the claims and specification are riddled with non-standard terminology and confusing, prolix phrases. For instance, “functional” and “non-functional” are used when the proper terms would be --functionalized-- and --non-functionalized--. “Characterized in that” is normally --wherein--. “Function” is normally --functional group--. “Designates” is normally --means--. “Expression” is normally --term--. “Playing the role of” is normally --acting as--. “Corresponds to” is normally --is--. Salts do not have commas and spaces between the cationic and anionic portions. In general the entire specification is written more like an academic research paper than a legal document, which a patent specification is.

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

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4. Claims 33-64 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims overall are riddled with errors too numerous to detail, but an attempt will be made below to outline in general what needs to be done to these claims to make them more comprehensible and conform more to standard US patent practice and chemical terminology.

Claim 33 provides for the use of an ionic liquid, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 33-45, 63 and 64 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim 57 provides for the use of a composition of claim 46, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 57 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex*

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*parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F.

Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim 58 provides for the use of a composition of claim 46, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 58-62 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Throughout the claims, various improper, ambiguous, or prolix terms are used where more conventional descriptive terms would be more helpful. For instance, “functional” and “non-functional” are used when the proper terms would be --functionalized-- and --non-functionalized--. “Characterized in that” is normally --wherein--. “Function” is normally --functional group--. “Designates” is normally --means--. “Expression” is normally --term--. “Playing the role of” is normally --acting as--. “Corresponds to” is normally --is--. Salts do not have commas and spaces between the cationic and anionic portions. “Possibly representing” is normally --optionally--. “Standard” methods is omnibus, and “means” is a term of art denoting an apparatus, not simply a process. “Functionalized salt (salt with a dedicated task)” sounds anthropomorphic but nevertheless is also a range within a range in a sense since it appears as if the first phrase is insufficient to describe the salt completely. Separate steps of method claims

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are normally numbered or lettered serially instead of being denoted by bullets. Likewise, separate ingredients in composition claims are normally denoted by numbers or letters instead of bullets. When several alternative steps or compounds are serially recited, the "or" belongs at the end of the previous member of the group, not at the beginning of the next member. When a numerical variable is recited that must be an integer, it is not clear if the two numbers at either end of the range are included or excluded unless this is explicitly recited. Use of accepted conventional symbols for chemical elements for something other than those chemical elements makes the claim unnecessarily confusing. When a generic or specific chemical formula having variable identities for some of the elements or chemical groups is recited, the formula should be given first, followed by definitions of any of the variables in the formula, not vice versa. The methods of claims 63 and 64 are different methods than that of claim 33 from which these former claims depend, hence it is not clear just which method is being claimed in the dependent claims. Claims 58-64 drawn to methods of making chemical libraries are completely incomprehensible.

The phrase "for example" renders the claims in which it appears indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d). The phrase "such as" renders the claims in which it appears indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP §

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2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, the phrases "namely", "in particular", and "preferably" are frequently used to more specifically define a variable term or a physical parameter within the same claim. None is properly used within the same claim; instead, there must be a dependent claim which further limits the variable or parameter.

Improper Markush terminology is noted throughout the claims. Applicants use the word "chosen" when this is not a standard word used in reciting a Markush group, and hence it is not clear if it is intended to mean an open, closed, or semiclosed Markush group. Instead, "comprises" is used for open Markush groups, "is selected from the group consisting of" or "is" is used for closed Markush groups, and "consisting essentially of" is used for semiclosed Markush groups. These terms have been in use for decades, hence their legal meanings are well-known and unambiguous.

Various names of inventors are used to refer to particular reactions catalyzed, particularly in claims 59-64. These names are analogous to trademarks in that they denote the inventor/discoverer of the reaction rather than the reaction itself. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the



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claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. As applied here, a generic description of the reaction using chemical terms, e.g. starting materials, product made, how the reaction proceeds (e.g. 4 + 2 cycloaddition, in the presence of a base), would be required to more accurately describe the actual chemical reaction.

Claims 59-61 and 63 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from another multiply dependent claim. See MPEP § 608.01(n). Accordingly, the claims 59-61 and 63 not been further treated on the merits. Each of these claims depends from not one but two different claims, with the second claim normally being out of the chain of dependency of the first claim, hence it is not clear just which claim the recited claims in fact depend from.

In addition, claims 59 and 60 recite limitations from canceled claim 20, hence the scope of claims 59 and 60 is indefinite.

5. Claims 33-64 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Due to the extremely confusing nature of the language currently used in the claims as well as its functional nature, it is not at all clear what the central invention of this application is. It seems to be something about

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two different ionic liquids being mixed together, one having no unusual functional groups, the other having such functional groups, but this does not appear to be recited at all in claim 33, and nowhere in the claims is there much but functional language used to describe these ionic liquids or functional groups. The scope of what appears to be recited in the claims seems to greatly exceed what is actually disclosed in the specification. See *Ex parte Slob*, 157 USPQ 172 (Bd. Pat. App. Interf. 1968).

6. Claims 33-64 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for only the specific embodiments found in the experimental section of the specification, does not reasonably provide enablement for any of the broad paper embodiments actually claimed. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims. The current claims are exceptionally broad and hypothetical, hence one of ordinary skill in the art would be required to engage in extensive experimentation in order to determine the actual metes and bounds of the protection sought as well as what is not covered by the present claims.

7. Due to the extensive nature of the errors in the present claims and their indefinite nature, no meaningful search was possible. Likewise, due to the need for extensive revision of the claims in order to overcome the various formalities against them, it is anticipated that the next Office action will be final.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Pasterczyk whose telephone number is 571-272-1375. The examiner can normally be reached on M-F from 9 to 5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



J. Pasterczyk

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7/20/06



J. LORENGO  
SUPERVISORY PATENT EXAMINER